

Mumbai University

Question Paper

**[IDOL – REVISED COURSE]
(APRIL – 2015)**

PAPER - I

**INTERNET
TECHNOLOGIES**

Time: 3 Hours**Total Marks:** 100**N.B.:** (1) All Question are Compulsory.

(2) Make Suitable Assumptions Wherever Necessary And State The Assumptions Made.

(3) Answer To The Same Question Must Be Written Together.

(4) Number To The Right Indicates Marks.

(5) Draw Neat Labeled Diagrams Wherever Necessary.

(6) Use of Non – Programmable Calculator is allowed.

Q.1 ATTEMPT ANY TWO QUESTIONS: (10 MARKS)

- (A) Explain Input Modules of TCP. (5)
- (B) Explain Recursive and Iterative Resolution in DNS. (5)
- (C) Explain IPv6 Base Header Format. (5)
- (D) Explain Update Message of BGP. (5)

Q.2 ATTEMPT ANY THREE QUESTIONS: (15 MARKS)

- (A) Write a note on NAT (Network Address Translation). (5)
- (B) Explain role of Transport Layer. (5)
- (C) Explain Supernetting with example. (5)
- (D) Explain Unicast, Anycast and Multicast Address in IPv6. (5)
- (E) Explain strategies for transmission from IPv4 to IPv6. (5)
- (F) Write a note on Classless Addressing. (5)

Q.3 ATTEMPT ANY THREE QUESTIONS: (15 MARKS)

- (A) Draw and explain Packet Format of ARP. (5)
- (B) Write and explain Pseudo Code of Cache Control Module of ARP. (5)
- (C) List and explain in brief Error Reporting Messages of ICMP. (5)
- (D) Explain Registration Request Format of Mobile Communication. (5)
- (E) Explain Two-Node instability in RIP. (5)
- (F) Explain various types of links in OSPF. (5)

Q.4 ATTEMPT ANY THREE QUESTIONS: (15 MARKS)

- (A) State and explain Services of UDP. (5)
- (B) Write and explain Pseudo Code of Input Module of UDP. (5)
- (C) Explain Byte Number, Sequence Number and Acknowledgment Number used in TCP with example. (5)
- (D) Explain TCP Connection Establishment. (5)
- (E) Explain SCTP Packet Format. (5)
- (F) Explain SACK Chuck of SCTP. (5)

Q.5 ATTEMPT ANY THREE QUESTIONS: (15 MARKS)

- (A) Draw and explain DHCP Client Transition Diagram. (5)
- (B) Explain different sections of Domain Name Space Tree. (5)
- (C) Explain the concept of NVT and NVT Character Set. (5)
- (D) Explain in brief components of SSH. (5)
- (E) Explain in brief Communication Over Control Connection and Data Connection. (5)
- (F) Explain RRQ and WRQ Messages of TFTP. (5)

[TURN OVER]

Q.6 ATTEMPT ANY THREE QUESTIONS: (15 MARKS)

- (A) Explain in detail Static, Dynamic and Active Web Documents. (5)
- (B) Explain Persistence and Nonpersistent Connection of HTTP. (5)
- (C) Write a note on User Agent of Email System. (5)
- (D) Explain in detail the role of POP3 and IMAP4 in Email System. (5)
- (E) Draw and explain SNMP PDU Format. (5)
- (F) Draw and explain RTP Packet Format. (5)

Q.7 ATTEMPT ANY THREE QUESTIONS: (15 MARKS)

- (A) Explain in detail four constructors used to create DatagramSocket. (5)
 - (B) Write TCP Socket Program that will Reverse a number. (5)
 - (C) Explain ServerSocket Class with its methods and properties. (5)
 - (D) Explain how UDP Socket Programming works? (5)
 - (E) Write UDP Socket Program that will display factorial of a number. (5)
 - (F) Write a Client/Server Application where a client contacts the server to obtain random number. Use Socket and Serer Socket. (5)
-